

7.5

291 HW p375 13, 15, 17, 35, 38, 39, 41

13.  $3x+8=0$

$3x = -8$

$x = -\frac{8}{3}$  1 IR

15.  $x^3+9x=0$

$x(x^2+9)=0$

$x^2 = -9$

$x=0$   $x = \pm 3i$

1 IR 2 imag.

17.  $x^4-16=0$

$(x^2+4)(x^2-4)=0$

$x^2 = -4$   $x^2 = 4$

$x = \pm 2i$   $x = \pm 2$

2 IR 2 imag

35.

-4, 1, 5

sum 6 prod = 5

$(x+4)(x^2-6x+5)=0$

$x^3-6x^2+5x$

$4x^2-24x+20$

$x^3-2x^2-19x+20=0$

38.  $2i, 3i, 1$

$-2i, -3i$

sum = 0 sum = 0  $x-1$

prod = 4 prod = 9

$(x^2+4)(x^2+9)(x-1)=0$

$(x^4+13x^2+36)(x-1)$

$x^5+13x^3+36x$

$-x^4-13x^2-36$

$x^5-x^4+13x^3-13x^2+36x-36=0$

39.  $9, 1+2i, 1-2i$

sum = 2

prod =  $1 - 4i^2 = 5$

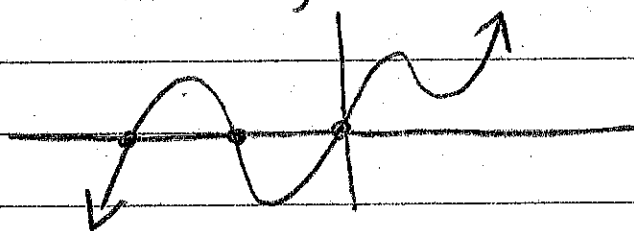
$$(x-9)(x^2-2x+5)=0$$

$$x^3 - 2x^2 + 5x$$

$$-9x^2 + 18x - 45$$

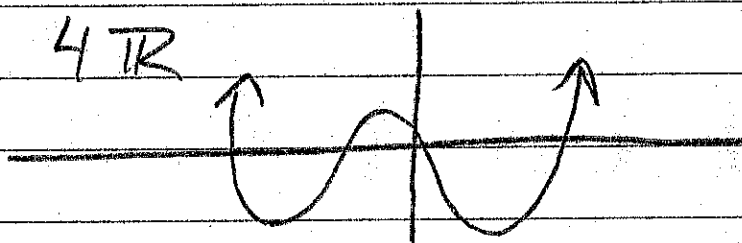
$$x^3 - 11x^2 + 23x - 45 = 0$$

41. (a) 3R 2imag



degree of 5

(b) 4TR



degree of 4

(c) 2 imaginary

